

120 cont. /

461 like the tapui amuenín and mua akenín (builder of houses and
538 organizer of agricultural work), there are the kamí tarén
(one who lives in his hammock) and the tereutasén naké (the
eternal stroller-about), who cannot relax because he has a
pointed stick in his critical part, and the karán (traveler),
who often turns out to be a karán-karán (head insect), who lives
off the work of others. Precisely on the subject of these last
a few days ago I received a drawing from one of those educated
in our boarding school in San Francisco de Luepa, with the
following expressive caption: Kamí tarenkon, iuantón,

"Those who live in the hammock, live hungry."

114
433 43. For more proof I want to transcribe Dr. Simpson's
461 words in his work Los Kamarakotos, page 541, on this same
subject, since we are in complete agreement. "The Kamara-
koto have a very definite standard of living which almost all
of them attain. They work hard to maintain a home of their
own, with a good house, adequate conuco /fields/, hammocks,
baskets, and all of the goods that they need, personal adorn-
ments, and other items of property inherent in their way of
life.

"When these necessities are for the moment satisfied, 121/
the Indians relax and have fun. The heaping up of wealth,
saving for the future, and any accumulation of goods that is
not for daily use is not even attempted. Only in this sense
can they be considered true loafers.

"Bearing in mind their standard, they have abundant energy
that they display when, by this same standard, they have any
reason whatsoever to work; it is thus completely unjust to
[462] apply to them the term idlers." "Neither is it true, say what
you will about other Indians, that the Kamarakoto assign to
their women an inequitable portion of the work."

44. Whence, then, it will be said, the backwardness
and lack of culture of these Indians? I am the first to recognize
and to touch with my own hands the lack of culture and

291 This is the so-called taurón, or
 789 /40 cont./ charm for sandals or for face paintings before going on a trip
 302 so that Amariuak will not see us, for he is the spirit of fainting
 484 spells, epileptic attacks, etc.

(Written down in Pemón by the same person.)

000 The Egyptian magic formula against burns says as follows:

"Thy son, Horus, burns upon the mountain. -- Is there water there? -- No, there is not. -- There is water in my mouth, the Nile is between my legs. I am going to extinguish the fire. (These words are said over the /plate appears here/ /41/ milk of one who has given birth to a child, over seeds, over sheep's wool. It is applied to the burn.)"

126 Many of the times when I was collecting their charms for
 753 study, they would tell me with all innocence and candor that
 123 these were the remedies that God had provided them with. And when I put it to them how was it that we, thanks to a moderate life and to medicines, were healthier than they, they replied that this was not due to medicines but to the many prayers which the Fathers knew.

90. Indian mothers, extremely loving and as devoted as any woman to their children, on several occasions attributed the coincidental illness of their children to the evil influence of paper (karetá) or the slips of paper on which they saw us writing their names; either because they considered the paper itself to be mysterious, or perhaps because they believed that the tender soul of the children might become stuck to the paper. Others, by contrast, attributed the well-being of their newborn to blowing, salt, crosses, and other baptismal ceremonies.

All this that I say is naturally now coming to be understood, since, thanks to God, these false impressions are gradually being set aside, founded as they were in the paralogsms of magic, and the distinction between spiritual religion and corporal medicine is coming to be understood.

114 had none of the usual executive tasks or camp work to do or to supervise and was able to devote all my waking hours to the study of the Indians. This had the effect of giving me about twice as much work time as would have been available under the usual circumstances of such expeditions and enabled me to do a great deal more than I could ordinarily have hoped to do in the few weeks available.

115
124 This study was also exceptionally favored by the employment of Antonio Montedeoca and his assignment to me as interpreter and general informant. He is a full-blooded member of the tribe and thoroughly acquainted with its language and with all its customs. He is also a man of importance in the tribe whose instructions and wishes were always fully carried out by the other Indians. At the same time, he has received some schooling in a Venezuelan town and so was able to convey all the desired information to me in comprehensible Spanish. He was very co-operative, intelligent, and quick-witted. Statements that appeared at all doubtful were not recorded on his authority alone and I took every opportunity to check them in all directions (never finding that he had willfully misled me) but he was my main informant and he spent many hours and days patiently showing and explaining to me everything possible. This was ideal assistance and it, too, made it possible to gather far more and better information than could have been hoped for.

126 A very considerable collection of almost all the portable objects in use in the tribe was also made and this was generously presented by the Ministry of Fomento to the American Museum of Natural History where I have been able to study it at leisure.

101 From Kamarata we were flown to Santa Elena by James Angel, whom I
114 also wish to thank, as well as the Línea Aeropostal which flew us in to Kama-
121 rata and out from Santa Elena. At the latter place we remained for about ten
122 days, the purpose being not a study of the Indians there, the Tsurepanes, for their own sake but for comparison. As I have remarked, the Tsurepanes are relatively well known scientifically and my brief observations were only for the purpose of permitting a first-hand comparison with the Kamarakotos, giving more reality to the literature for me, and supplying a few needed data still lacking in the literature. Here the hospitality and assistance of Dr. Fernández-Peña were of the greatest value and I wish also to thank the reverend fathers of the Capuchin mission for their friendly interest and whole-hearted co-operation.

122 The materials so gathered have been worked up at the American Museum
128 of Natural History in New York, and acknowledgments are due to that institution for the considerable amount of my time and for many facilities afforded for this work, which is outside the field of the work for which I am there regularly employed.

128 I am indebted to several persons for assistance with various details. J. Martínez-Mendoza A., of Caracas, and Charles B. Hitchcock, of New York,

120 examined many maps and determined the first appearance of the name of this tribe on a map. Gene Weltfish, of New York, gave advice and references concerning phonetics. E. W. Berry, of Baltimore, gave information on the antiquity of Musa and Dioscorea in America. A. Jahn, of Caracas, gave some suggestions concerning the name and history of the tribe. Of course, none of these authorities is responsible for the use I have made of their information, and in one or two cases my opinions differ from theirs, although mine could not have been formed without the aid of theirs.

114 Finally, it should be mentioned that my wife, Dr. Anne Roe, accompanied me throughout the field work. The observations on women's dresses were made by her and the judgment of the psychological characters of the Indians is in part based on her expert opinion. She has helped also in other less definite respects.

126 The phonetics represent in the main the pronunciation of Antonio Montes-
128 deoca, who speaks Kamarakoto as his native language and without an accent
115 recognizable by other members of the tribe. Most words were also heard from
117 one or many non-Spanish-speaking Indians and the very few anomalies in pronunciation noted or reconciled.

The descriptions of material culture are fairly full and can hardly involve any serious misapprehensions, for I was able to see, handle, draw or photograph, and often to collect practically everything made or used by the Indians.

114 As regards the far more difficult problems of social culture, my observa-
128 tions are necessarily less complete. The best work in this field requires years of residence, fluent grasp of the local dialect, and the complete confidence of the Indians. I had only a few weeks and of course the other requirements could not be met in that time. Before I left, however, and in time to be of material aid, I had enough Indian words at least to be sure that my interpreter was really giving me the gist of what was said and to acquire some information without his aid. There was naturally some reticence on certain points but in almost all cases this was largely broken down before I left. Although many of the more esoteric details could not be obtained in the time available, the general outline and many details of social culture were obtained and these were so carefully checked that I feel confident of their essential accuracy except where I have explicitly stated doubts.

121 In this connection there is one deliberate omission. Everything pertain-
128 ing to health, disease and medicine was assigned for study to the medical doctor who accompanied the party and is therefore omitted from this monograph. In dealing with some essentially non-medical subjects it was necessary to touch briefly on this field, for instance, approximate vital statistics were incidental to census taking and somatic records, and exorcism as a medical procedure had to be mentioned in connection with magic and religion. Everything strictly or primarily medical is, however, purposely left out. There are.

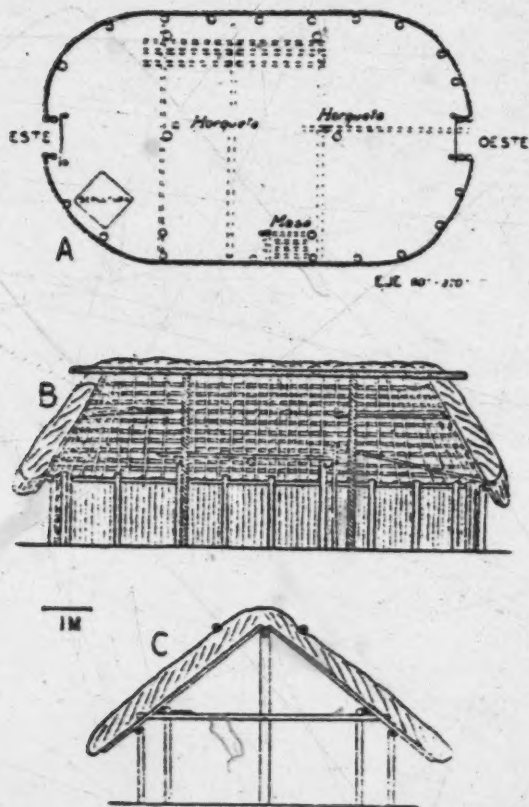


Fig. 6 — Kamarakoto Dwelling.

Building F at Uruyén (see Map, Fig. 11), a parapan. A. plan.

B. diagrammatic longitudinal section, with far side in projection.

C. diagrammatic transverse section showing eastern cross-member.

The transverse broken lines in A are the three rafters, and poles laid on them to form a storage shelf are similarly indicated. The former head of the household is buried in the grave, shown on the plan, and the house is therefore abandoned but is otherwise entirely typical of those in use.

Abandoned houses are commonly simply left to disintegrate as these have been. These particular buildings are still in almost perfect condition and were used for making plans of typical structures because of the convenience of measuring and sketching buildings not full of people and paraphernalia.

[text continues on p. 123]

283 textiles from it is woman's work while the twisting of bast and the manufacture
 286 of textiles from it, although occasionally performed by a woman, is generally
 172A man's work.
 172

In this tribe, however, bast textiles are uncommon. Bast thread or twine is usually used as such and the only textile usually made of it is netting.

286 The Kamarakotos say that they formerly made large pieces of cloth not
 [17] unlike the "zaraza" or trade goods now used for loin cloths and dresses. They are still acquainted with a weaving technique capable of producing true cloth, hardly identical with "zaraza" but similar, and such fabrics are known from related tribes. (E.g., Roth, 1924, Plate 10, Fig. C, shows an Akawai baby sling that includes a large quadrangle of native woven cloth.) At present, however, the supply of trade goods is nearly enough equal to the demand and this true weaving technique is used only to produce long narrow bands.

The Kamarakotos now know and use five thread-textile techniques, each closely associated with different finished articles. To these should be added the several bead-techniques, which also use thread but are so distinct that they are here discussed separately. The five thread techniques are as follows:

1. True weaving, producing long narrow bands for headdresses, carrying straps, etc.
2. Loom twining, producing an open-meshed fabric made in the form of hammocks.
3. Loom plaiting, producing wide circular bands used as baby slings.
4. One-needle crocheting, producing a tight fabric usually in small circular bands, for armlets, anklets, purses (pakara), etc.
5. Knotting, producing netting mainly for fish nets.

[114] True weaving is the one textile technique that I did not see and the de-
 [12] scription of it was not entirely clear to me. I have, however, good specimens of the textile thus made. The warp is composed of relatively few strands, usually four for a headband but as many as thirty-two for a carrying strap, which are stretched on a simple frame or between fixed sticks (this is the point that was not clear to me in the description of the process). The weft is then woven in by hand, using a flat stick as a separator and batten. (The Kamarakotos do not use either heddles or shuttles in any of their textile work, although both are known among some rather distantly related tribes in British Guiana.) The whole weft is a single continuous strand, which doubles back around the last warp strand on each side.

Although the weaving technique is basically the same for both, two fabrics of quite different appearance are made in this way (Fig. 37). In one, used for headbands, each warp strand is a thick bundle of separate threads (each of which is, in turn, usually two-ply). A six-fold warp strand is common, but the number is not constant. These heavy warp strands remain straight and the weft strands are simply twined around them. The surface of the finished fabric is

*285 pattern at right angles to its former course and with upper and lower sides reversed. The weave forms a pattern of concentric squares, which contrast also in color and smoothness since the skin is left on the manare and successive squares are formed by the smoother, browner outer sides and by the rougher, paler inner sides of the strands. These are used for fanning the fire, for serving food, and for a dozen other purposes for which small mats are useful. The Kamarakotos do not make fans, like those of the Arawaks and some other Indians, that are definitely fan-shaped or that have handles.

Although simple in form, the orapa (Fig. 56 B) commonly reaches the highest point of weaving and design shown by these Indians, rivaled in this respect only by the amartu. First-class orapa are so difficult to weave that not all weavers are equal to this and they are common items of trade both within the tribe and with neighboring tribes. Some of the best orapa in use by the Kamarakotos were made by Maquiritares but they are also made by Kamarakotos in essentially identical style and the following comments apply to the Kamarakoto work. I was unable to obtain one of the highly prized Kamarakoto specimens and the one that I illustrate was said to be of Mayongón (Maquiritare) origin, but it perfectly illustrates the Kamarakoto technique also. Indeed Roth has shown that identically similar trays are made by Arawaks, Wapishanas, Warraus, Akawais, Makuchis, Tarumas, and others.

The tray is woven as a flat, square mat with two different sets of strands (not a single set doubled over as in the o.olori) of which one is colored brown or black on what is to be the upper side in order to increase the pattern contrast. The fiber is manare in finer strands than those usually used and the fabric is a pictorial twilled woven plaiting, the formula varied in accordance with the design but mainly one-over-two or one-over-three. The completed mat is cut into circular form and then edged and shaped so as to be definitely concave. The edging consists of a separate piece of all-over one-over-two or one-over-three twilled woven plaiting made in a seamless circle of the size required, doubled over the edge of the main mat and re-enforced by two opposite vine hoops, one outside and one inside the finished tray, bound into place by loops of curagua twine sewed through the fabric of the mat and edging.

These trays are not very specialized in use. Casave is served on them and they are also used for drying cotton or other things, for temporary storage, etc. 154

The Kamarakotos do not make circular open-ware trays, as some Arawaks do, nor do they make square trays of edged-mat type such as occur among the Makuchis and numerous more distantly related tribes.

The matirtu (Figs. 57-58), is a tray highly specialized in form, although less so in function. The bottom is a square, flat mat woven like the bottom of an orapa (but left square) and not like an o.olori. In rimming and edging this is shaped so as to be somewhat concave, but less so than the orapa.

154 [See footnote on p. 325, category 116 - Analysis]

643
631 The extent of this authority, such as it is, is most ill-defined. It does not clearly and definitely extend beyond the central group of the Kamarakotos and even here many of the Indians never have practical occasion to recognize it, although none would deny it. The Kamarakotos and Kamarakoto-like Indians of the Caroní and other more remote parts are aware of the cacique only when they have occasion to visit the central group. They appear to have no cacique of their own and those that did visit the central group during our stay verbally recognized the authority of this cacique. He submits that his authority does extend widely into this outer region (with which he himself was almost entirely unacquainted until our visit) but in fact his power there is not even nominal. Even in this extremely attenuated way, it is completely false to speak of him as in authority over all the Arekunas, including those of the Gran Sabana and the Taurepánes, although this was claimed for him. The Arekunas as a whole do not have any one chief, and many of them acknowledge no authority outside their own settlements. It would be improper to speak of an Arekuna tribe, since the Arekunas are not an integrated unit, either ethnically or politically, but an agglomeration of small, physically and culturally related but quite distant groups.

562
622
643
171 Schomburgk speaks of (uncommon) cases of female chiefs among the Makuchi. Among the Kamarakotos no woman is ever a chief, either over a household or over a larger group, although otherwise women are by no means treated as inferior beings.

Relationship Concepts

602
601
114 As with many primitive peoples, concepts of family relationships in Kamarakoto are more complex than in nations of European origin, are more specific, and rest on a different basis. Most vocabularies, including even the unusually fine Taurepán vocabulary of Koch-Grünberg, give an imperfect idea of these relationships. This is usually because the investigator tends to seek the Indian equivalents of the words of his own language, a system adequate for obtaining names of objects and for many other purposes but quite inadequate when, as with relationships, the concepts expressed in the two languages are far from being the same. The following carefully checked information was obtained in several different interviews by postulating many different sorts of family groups and asking what each individual in the group would call each other individually. This is a field in which an outside investigator could probably never achieve absolutely complete knowledge, at least not without many years of actual membership in the tribe, but the following account is believed to be nearly complete and essentially correct. Comparisons are made chiefly with

423
648 The lack of formal title to their land under the Venezuelan legal system presents, for the moment, no special problem as regards land used for dwelling, farming, hunting, and fishing. There is no pressure on such land and at present no tendency by non-Kamarakotos to compete for it, although a colonization scheme such as has been suggested might suddenly present the Indians with a very serious and perhaps, for them, insoluble problem. They are, however, already aware of possible difficulty as regards title to the gold deposits in their territory, even though the gold so far discovered has not been sufficient to cause a serious invasion of their remote region. Their reasoned attitude regarding this is to establish title to the gold deposits for the cacique. In their consideration he is not, however, a personal owner but only a custodian on behalf of the whole group, just as household property can be considered as belonging, in a rather vague but real sense, to the head of the household but is freely used, by all its members. There is a rather close analogy to the crown lands of a constitutional monarchy, where title is said to belong to the king but he is in fact an owner only as he represents the state as a whole and the property is actually communal.

This communal nature of the mines that "belong" to the cacique is shown in practice by the fact that any adult male member of the tribe has the right of working the mines and that the gold found by any man becomes his personal property without any deduction of royalty, rental, or tribute. Even further than this, if a particularly rich pocket is discovered it is customary to notify the other members of the tribe so that anyone who wishes to can share in it.

422
425 Movable possessions are more rigidly owned than is land and in this case the ownership is usually to be considered as purely personal and not as communal even in the sense that household lands belong to the family group rather than specifically to the to¹-esa² as an individual. Here the principles of ownership arising from manufacture, as between different households, and from use, as within a household, are dominant. Thus a new hammock made by a woman of a given household is the property of that household and its barter to another group may be by the maker or by the to²-esa² as representing the household, but if it is assigned to and used by a particular member of the household, it is his, or her, personal property. So, too, in barter or purchase of goods from other tribes or from Venezuelans, this may be done on a purely personal basis or by the to³-esa² for his household and subsequent personal ownership is established by the individual who uses the object or material in question.

● [126] In our trading with the Indians, it was noteworthy, for instance, that a basket made, of course, by a man but already in use by a woman, was not sold except with the woman's consent and that the price was generally payable to her or for her benefit. On the other hand, a new basket was sold by and for the maker. In paying for labor, the women generally spent the sums due them on themselves and on the young children, not for their husbands. Commonly a man [593] would trade his labor for goods for his family rather than for himself.

868 Children generally follow much the same occupations as their elders of
 857 the same sex, beginning by playing that they are doing so, as our children
 "play house," and ending by performing the actual work as they become capa-
 524 ble of it. Their playthings, too, are almost invariably small replicas or imita-
 868 tions of objects used by their elders. Thus the first toy of a small boy is com-
 monly an improvised bow, with which he "plays Indian," as a white boy might
 (Fig. 79). Some of the boys show great ingenuity in making imitations of
 weapons, tools, etc. 181

The Kamarakotos make cat's-cradles, but I did not attempt to collect
 121 these. I saw none not already recorded from the Makuchis or Akawah (see es-
 114 pecially Roth, 1924, whose elaborate compilation of these string-figures in-
 cludes all that I saw among the Kamarakotos).

Mythology

773 Like all Indians, the Kamarakotos have an extensive body of myths and
 120 legends. It is probable, however, that these are already dying out to some ex-
 tent, since few of the younger members of the tribe seemed to have much knowl-
 edge of them or to take much interest in them except as casual stories. Un-
 126 doubtedly, a great many are still accurately known, but our time permitted
 the textual record of only one. 182 This is a typical, representative example
 and serves excellently to illustrate the characteristics of Kamarakoto mythology
 and its probable sources and relationships.

539 Rigid accuracy and authenticity may be claimed for the text here given,
 126 despite the linguistic and other difficulties. It was told to me by Antonio
 120 Montedeoca during four sessions in March, 1939. Antonio gave the story not
 115 only from his own memory but also from the collected versions of numerous
 other members of the tribe, several of whom were present at each session and
 who were carefully consulted on all doubtful points. The story as a whole was
 translated into Spanish by Antonio, with passages also given in Kamarakoto by
 him and by others present. I recorded it in English and then read it back, in
 Spanish, section by section, to Antonio who carefully corrected the slightest
 539 deviation from the meaning of the Kamarakoto text. 183 The Kamarakoto text
 itself is not verbally memorized and varies with the teller, but its sense is in-
 variable and this procedure guarantees that this sense is fully retained in the
 present version.

The Story of Malchak. 184

539 Malchak was an Indian who lived a long time ago in what we now call
 Kamarata. At that time, men lived for centuries and centuries. When Malchak
 181-184 [see footnotes on p. 329, category 116 - Analyst]

[p. 284]

SOMATIC CHARACTERS

General Appearance

142
[114] Most travelers with wide acquaintance among South American Indians agree that the Arekunas in particular or the Roroimá mass of Caribs in general are physically the most attractive (by usual White standards) of all these Indians. I agree with this judgment and add that the Kamarakotos fully share the handsomeness of the other Arekunas. In two cases it proved that residents of Kamarata whom I hesitated at first sight to class as Kamarakotos, because they were less attractive, did indeed belong to other tribes.

[162] The appearance of typical Kamarakotos is adequately shown by the accompanying photographs (Figs. 84-92). Koch-Grünberg's many photographs of Taupéanes (as well as the few taken by me, among them Figs. 96-98) could almost equally well be given as representative of Kamarakoto physiognomy, for I doubt whether anyone could tell from appearance alone to which of these two tribes an Arekuna belonged.

● [126] We had no means of measuring or recording color and a subjective impression is not very useful. The skin is, of course, brown, with little or no definitely red cast, and when not darkened by the sun it is rather pale. Many nominally white people are nearly as dark as these Indians or, when tanned, even darker. The average lower-class Venezuelan, even in regions where there is little Negro blood, is as dark as a Kamarakoto or darker.

[302] The hair is invariably black and is almost invariably straight although one man, otherwise ordinary in appearance, has definitely wavy hair and several other individuals have a slight wave. There is not, even in these cases, any suggestion of kinky hair or of strong curliness. Of 24 native men recorded in detail, seven had sparse mustaches and two of these also had a few hairs on the chin. On most men face hair is completely absent and body hair slight. No one appeared to have shaved or plucked the face.

153
151 *There are no mentally pathological or psychotic individuals*
(although there are among the Taurepánes) and as far as one can judge in such an alien race the average of intelligence is well up to the Venezuelan standard, or that of any other civilized country. The most stupid man encountered was not of Kamarakoto descent and although below the Kamarakoto observed range was dull normal rather than truly abnormal in any way.

Measurements

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126 No special equipment for anthropometry was available, so that it seemed best to take only a few standard measurements on each of as many subjects as possible. In all, 68 individuals, mostly Kamarakotos, were measured in Kamarakoto and 25 Taurepánes in Santa Elena. As far as I know, these are the first measurements to be made on Arekunas of any sort, and relatively few are available for any living Venezuelan Indians.

Head calipers were devised on the spot from pieces cut from an empty gasoline tin, a clumsy instrument but one that proved to give consistent and accurate results within about 1%, or less, quite close enough for figures to be averaged and almost as close as can be obtained on a living subject with the best of means. Only the standard head length and width (with the index calculated from them) were taken. These were recorded and are here given throughout in millimeters and were read to the closest millimeter. Stature was measured against a post and span with a steel tape. These were read to the nearest half centimeter and are given in centimeters. Sitting height, similarly read and given, was obtained by having the subject sit on a box against a post, with the thighs approximately horizontal, the buttocks firmly against the post, and the torso as erect as possible with the eyes directed straight forward. The important element leg-length was not directly measured but was taken as the difference between stature (standing height) and sitting height, also given in centimeters to the nearest half centimeter. Weight could be only very crudely taken with game scales calibrated in pounds and readable only to the nearest 5 pounds, but accurate to that point. These weights are given in pounds. Despite this crudeness, it was worthwhile to investigate this point which seems never to have been studied in any allied group and the averages are generally reliable to within about a pound. Weights of Taurepánes were not taken.

126 Besides these measurements, the detailed records include the Spanish name (if any) of each individual, estimated or relative age, place of residence, notes on personal appearance, and whenever accurately possible relationship to other recorded individuals, marital state, and numbers and sexes of children living and dead. I also have at least one and sometimes several photographs of each recorded individual. These detailed records are permanently filed and available to anyone interested, but they are not here published. For present

- /26 purposes analyses and comparisons of the various groups are adequate and more important and comprehensible than would be publication of all the raw data.

Kamarakoto measurements may be assumed to include only individuals from what I have called the central group. More remote individuals could not have been included in the correct proportions and would have made the homogeneity and representativeness of the sample uncertain. The central group samples are excellent and give good information on the population even though the samples are small. They necessarily include only individuals who visited camp and could be persuaded to be measured,²³⁷ but any bias caused by this selection was carefully watched for and is believed not to have affected the final sample. The various subsamples (adult males, etc.) have been checked for age, geographic, and family distribution, and found to be distributed in all these respects in a way that would normally occur in completely random sampling with the entire central group available.

- 126 Measurements of children, although usually avoided by anthropologists,
561 were also taken because they can provide interesting data on growth and no such data have hitherto been available for any comparable group. The records were, of course, carefully isolated from those of the adult groups. For the latter, three samples were separated: young adult males, fully adult males, and adult
[589] females. The first is the bachelor group, which I have mentioned before as a concomitant of polygamy. They are fully mature but young men (probably around 20 years of age) who are considered to be adult and marriageable but are not yet married. At the time of recording they were believed to be fully grown, but the figures now reveal that as a group they are slightly but significantly smaller than the fully adult men. The latter are those who are certainly fully grown, married, and with children and include various ages, probably all between 20 and 50, in about the same proportions as the tribe as a whole. Among the women no young adult group can be distinguished and perhaps one or two recorded individuals had not quite reached their full stature, but if so this cannot have altered the data significantly.

- 128 In all the following tabular matter R = observed range, M = arithmetic
141 mean, σ = standard deviation, V = coefficient of variation, d = deviation from the arithmetic mean, N = size of sample. P = probability of equal or greater deviation in random sampling of one population (as a fraction of 1.00), and X = an individual measurement, standard, not probable, errors are given. The word "significant" is used in all following paragraphs only in a fully technical sense and means that an objective statistical test of significance (using $d/\sigma = 3$ or $P = .01$ as the limit unless otherwise stated) has been applied, even when the details or numerical results of such a test have not been explicitly published here.

- 141 The pertinent data for the three adult Kamarakoto groups are as follows:
237 [see footnote on pp. 334-335, category 116 - Analyst]

14/ from the Taupéan sample is not significant (P somewhat greater than .02) but in view of the other relationships this can probably be imputed to the deficiency of that sample. It is, however, to be kept in mind as a possibility that these people might belong to a group that is more variable than are the Kamarakotos in this respect, rather than one that is definitely more broad-headed. This would not alter the fact that they are different.

● [124] I was able to measure three adult male Arekunas from south and west of Kamarata, typical of the Indians of outlying regions, with respect to the central Kamarakotos, whose pertinence to this tribe is dubious. They compare as follows with the fully adult Kamarakotos:

Comparison of Three Adult Male Arekunas from the
Region of the Caroni with Adult Male Kamarakotos

Measurement	Individual			
	No.	X	d	d/σ
Head length	1	195	+ 8.1	1.5
	2	181	- 5.9	1.1
	3	188	+ 1.1	.2
Head breadth	1	155	+ .8	.2
	2	148	- 6.2	1.7
	3	157	+ 2.8	.8
Head index	1	79	- 3.2	1.4
	2	82	- .2	.1
	3	84	+ 1.8	.8
Stature	1	165	+ 5.0	1.0
	2	164 1/2	- .5	.1
	3	172 1/2	+ 12.5	2.5
Sitting height	1	89	+ 4.2	1.4
	2	82	- 2.8	.9
	3	79	- 5.8	1.9
Span	1	175	+ 6.0	.9
	2	172	+ 3.0	.5
	3	175	+ 4.0	.6
Weight	1	155	+ 31.3	2.9
	2	115	- 8.7	.8
	3	115	- 8.7	.8

No. 3 (Fig. 94) is taller than any central Kamarakoto but the difference is not surely significant (P is between .02 and .01). No. 1 is distinctly outside the Kamarakoto normal range in weight (P definitely less than .01), but little

128 15 male children of pure central Kamarakoto stock that I measured can, with
 145 a single exception, be placed with almost complete certainty into three groups
 141 such that the relative ages of the groups are known and it is known that there
 is no overlap between them, even though the relative ages of individuals within
 a single group may still be uncertain. Omitting the one doubtful case, (who
 might belong either in group C or group D), the mean measurements of these
 groups, in comparison with young adults and full adults, are as follows:

Growth in Male Kamarakoto

	a. Mean of 4 children about 2-5 years old	b. Mean of 5 children about 7-9 years old	c. Mean of 5 children about 10-15 years old	d. Mean of 9 young adults	e. Mean of 15 full adults
Head length	171.5	175.9	180.4	182.7	186.9
Head breadth	141.5	145.6	148.2	152.4	154.3
Head index	82.5	83.9	81.0	83.2	82.2
Stature	95.4	126.8	144.7	155.0	160.0
Sitting height	54.0	67.0	75.2	80.9	84.9
Stature less sitting height	41.4	59.8	69.4	74.1	75.2
Span	96.0	128.4	150.2	162.4	169.0
Weight	26.3	56.0	81.0	122.2	122.7

- [126] Only eight female children were available for measurement, the females
 [123] in general being less employed by us as workers and somewhat shy about visit-
 ing our camp, where measurement was practicable. Three of these were of so
 nearly the same age that relative ages could not be certainly judged, but the
 others fell into a clear sequence, as follows:

193 88. Judging from my own observations and from those of Koch-Grünberg
127 and others, this suffix seems to be translated in the wrong person throughout
Baltasar's list, uya being first, not second, person.

● 126 89. When we had been taking photographs several small boys followed
153 us and each other around pointing and shouting "tsə?" in imitation of the shutter.
195 This seemed about to become the word for "camera" in Kamarakoto, but ap-
192 parently it gave way to the word retórata, from "retratar" which they often
heard us say in connection with photography and which they apparently decided
was the word for the object used rather than for the process.

197 90. But there are surely unknown or at least unfixed dialects within a
relatively short distance to the west and a longer distance to the south that are
very closely allied to Kamarakoto.

197 91. This is valid evidence of the close affinities, but it should be noted
192 that it is considerably aided by the fact that the Kamarakotos know a good many
Taurepán words as foreign words. They are inveterate traders and have acquired
[439] a smattering of several other Carib dialects, words that they know but do not
use among themselves.

101 92. He was under the erroneous impression that the other Arekunas were
114 forest tribes, which would have suggested a real distinction, but in fact they
are sabana Indians to just the same extent and in just the same way as the
Taurepanes.

101 93. But no good local name has been proposed. The Kamarakotos call
[103] them the Arekunas of Luepa, from what is now (but has only recently become)
[297] the principal place of that region. The missionaries of Luepa and Santa Elena
[114] tend to confine the name Arekuna to these Indians of the northern part of the
Gran Sabana, a usage that seems to me extremely inconvenient and contrary to
precedent and usage either native or European.

197 94. It is not a Kamarakoto vocabulary but resembles Kamarakoto more
114 than does Taurepán in some respects and differs more than does Taurepán in
others. I have gone through the vocabulary carefully but have not given any
comparisons with it here. Its status is thoroughly unsatisfactory for dialect
studies and the Arekuna language as a whole is better known in the Taurepán
dialect. I have not been able to find anywhere in Koch-Grünberg's five volumes
that he states, within several hundred miles, where his "Arekuna" is actually
spoken, or even any assurance that it is not a mixture of words from several
different Arekuna dialects.

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[114] 127. Even if we agree, as I do not, that the Caribs wore no clothing whatever before contact with Europeans. Alejo's date is too late by a century or two and it is virtually impossible that any authentic tribal memory is as old as that.

[123]
[562] 128. The women would never visit us except in dresses — I shall show on a later page that this was because of pride, fashion and authority, and not because of personal modesty or fear. They either stayed at home in the remoter places that we did not visit, or borrowed dresses for the occasion. The men wore trousers if they could, but had no hesitation in visiting us without them.

129. But by the time we left, the cacique was more conventionally clothed than we were and would have excited no comment on any city street. No other Indian achieved quite this degree of sartorial splendor.

130. Our party did supply them with some ready-made dresses, but this is a momentary phase. The women of the tribe as a whole are adopting and will soon universally wear the homemade costume described.

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114 131. This and the following paragraph are by my wife, Dr. Anne Roe.

171 132. In fact many culture traits common to these Indians and the civilized part of Venezuela are not evidence of Venezuelan influence on the Indians but of the reverse.

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● 126
128 133. except one Taurepán mosa that was not made for use but as a curio for a missionary, who supplied the heads. Very misleading data are sometimes given by such made-to-order specimens and I may emphasize here that I have described nothing that was not seen actually in use by the Indians and collected nothing but used objects or, when this was impossible, new ones made for use and carefully compared with those that had been used. In the field of their special skills, notably basketry, the Indians can and will supply almost anything that a collector wants, but if he describes what he wishes and has it made to order, the result is likely to be definitely non-Indian in form and design.

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301
304 134. If I understand Roth correctly (this passage is not entirely clear to me), he considers the belief that these bands permanently groove the limbs "ridiculous" and "physiologically impossible" "delusions." Nevertheless it is a fact, fully proven by the plainly visible effects of the bands even when the bands themselves have been removed.

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574 177. Of course all individuals spend intervals sleeping, but some are awake and hilarious at all times.

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579 178. This is a free and not a literal rendering. The language of these songs, despite the fact that they can include some improvisation, is not common speech but is "poetic," probably archaic, and is not entirely clear even to all the Indians. The translation given conveys the sense of the words as they understand them.

[193] 179. In prose language the equivalent would be some expression like autsimbe dai?, "I am satisfied, pleased."

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171 180. The Makuchi song given by Roth refers to the white clay paint, which was evidently essential to the dance in its more primitive or more stereotyped form, but in all the Kamarakoto dances such pseudo-ritualistic compulsions have become voluntary and are often omitted — this is true even of the parichara-pon.

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153 181. A boy at Uruyén made a remarkably good small model of an airplane, including workable wheels and a propeller that turned in the wind. I could not learn that he received any help or inspiration from more sophisticated sources and he maintained that the work was entirely his own idea and execution, but I find this almost incredible and cannot record it as a fact.

773 182. But as will be seen, this legend or myth is composite and consists of several quite distinct stories united by assigning the leading role to the same character.

773
115 183. It is interesting, as illustrative of his own comprehension and insistence on the value of complete accuracy, that Antonio himself demanded
● 126 this procedure and refused to leave a passage until convinced of my thorough
128 comprehension of it.

579 184. This is adopted as the best non-technical transcription of the name maichay.

[415] 185. A small gourd vessel, wai in Kamarakoto.

[825] 186. The kind called atsigamo, the Venezuelan "cachicamo."

[534] 187. maraka, a gourd rattle with a wooden handle.

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539
[825]188. The large kind called po. inga.

189. His death has nothing to do with the story — one of several such parenthetical statements that add circumstantial detail for no apparent reason.

190. Tangōi?191. Pangai?

[462]

192. The making of the press and sieve of basketwork is man's work, assigned to Maichak. The making of the casave itself is woman's work.

193. "Tirita" = manare.

[241]

194. Casave plant, kōsra.[482]
[171]

195. akai?. The use by Maichak of a sort of back-pack now used almost exclusively by women among the Kamarakotos is peculiar, and it is noteworthy that the akai is used by men among allied tribes.

[241]

196. The kind called polopakai?

[825]

197. A "chupacacao," kadau-kadau in Kamarakoto. The species of the two preceding birds was not mentioned.

● [126]
[192]

198. In using "king" and "queen," I follow Antonio's Spanish, "rey" and "reina." It should be "princess," since the king's daughter is meant, and the Indian words are, of course, better rendered as "chief" and "chief's daughter," but it seemed better to follow my main source, Antonio's Spanish version, as exactly as possible.

199. As the event proved, it was not the king, but the story is here told from Maichak's point of view.

200. See note 198, above.

[551]

201. The queen's name is nowhere given and my informants did not know it. The giving of any personal names is contrary to the practice of daily life.

[584]
[583]

202. The previous relationship was irregular, since the bride's parents were not consulted. Now her father's consent is sought to regularize the

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171 of ticks (which is highly doubtful), but the same thing is done where it is obvious-
 372 ly and wholly harmful and there is little doubt that this is merely attempted
 311 rationalization of an essentially irrational custom.

272 231. This ¹belongs to the colonial level in the sense that it was invented
 273 in colonial times to deal with a colonial introduction of new foodstuff, but to
 176 the aboriginal level in the sense that it was a purely Indian invention without
 177 direct European influence.
 409

177 232. Of course this ²may be a modern introduction in this tribe, but it
 235 belongs generally to the colonial level.

178 233. This instrument ³and its unchanged survival are emphasized because
 534 in many tribes the flageolet, or similar flute-like instrument, was definitely
 179 modified under European influence, but the Kamarakotos retain the purely
 aboriginal form.

114 234. As discussed elsewhere, some students believe that these ⁴belong to
 343 what I here call the colonial level, but I believe them to be aboriginal.

000 235. I do not speak here of the strictly religious aspects of this work.
 matters of opinion which it is not my business to discuss. Regardless of their
 own intentions, the work of missionaries always has widespread results also in
 the non-religious sphere which may legitimately be studied and evaluated quite
 aside from belief in any creed. These results are sometimes admirable, but it
 is an open secret that they are also sometimes deplorable. One may share the
 opinion that it is better to believe in Christ than in kanaima and still believe
 that it is better to retain native skills than to be taught to depend on insecure
 importation.

Similarly in speaking later of how little the Indians have to gain from
 the process of "civilization," religion is entirely excluded from the discussion
 and no judgment of its value to the Indians is implied.

236. These and the other suggestions made are not theoretical abstractions.
 Examples of impoverishment by the contrary policy can be cited not only from
 Venezuela but also from every country in the Americas.

123 237. Some reluctance was encountered but every person whom I asked
 ● 126 finally accepted. In the midst of operations, when all scruples seemed to have
 been conquered, the tribe suddenly and unanimously refused to be measured
 any more. On investigation, I finally learned that this was because the English
 numeral "eight," which I had several times called out to my wife or to

¹ [i.e. the cane press - Analyst]

² [i.e. chickens - Analyst]

⁴ [i.e. square shelters - Analyst]

³ [i.e. the flageolet - Analyst]

P

123 Mrs. Angel to write down, closely resembles the Kamarakoto words for "die"
 ● 126 or "dead." I went over to Urúyén, gathered some of the Indians, explained what "eight" means, and to prove it and reassure them taught some of them to count from one to ten in English — an accomplishment that may puzzle future visitors. They then returned to be measured and no further serious difficulty arose.

M

128 238. He has only one woman estimated to be older than 25 but younger
 141 than 40, and I have omitted her from the partial averages given above. His
 114 male series does not have such a gap.

P

M
 141 239. Thirty-three for head measurements, 30 for the others

240. Thirteen for head measurements, 10 for others

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241. Farabee's outstanding general conclusion was that forest tribes are larger than sabana tribes regardless of race, i. e. that forest Caribs more resemble forest Arawaks than they do sabana Caribs. He believes that the difference is an effect of environment, especially food. That the somatic differences of these various tribes are to some extent influenced by environment is possible, even probable, but Farabee's conclusion does not follow from his own figures if these are more carefully and correctly examined, and it is quite disproven by the present new data. Although manifestly allied to the Makuchis and just as typically sabana Indians, the Arekunas are at least as large as any of Farabee's forest Caribs, or even Arawaks, which may average a little larger than Caribs in this region. Since Farabee's sabana Caribs are simply the Makuchis, his data would tend to show not an influence of environment regardless of race, as he supposes, but a strictly racial difference. His figures merely suggested, and mine confirm, that the Makuchis are small Caribs, not that sabana Indians are small.

Moreover he has drawn conclusions that his data cannot prove, even if these conclusions are true. His samples of forest tribes are for the most part very inadequate and potentially misleading, and these tribes apparently differ considerably among themselves so that to lump them as one thing and to compare this very arbitrary and artificial average with the Makuchis, a good sample that is of one tribe, can prove nothing. He has also failed to show that his sample differences are significant regarding the populations, or even to consider this problem. It is evident that very few of them, even those used as a basis for strong conclusions, are really significant.